

## Claims

We claim:

- (1) A computer system comprising a processing computer for executing a predetermined process in response to an electronic message received from a terminal and for returning an electronic message to the sender of the received electronic message, a message broker for relaying electronic messages being transferred between said terminal and said processing computer, and a surveillance computer connected to said message broker via telecommunication circuit, said computer system further comprising:

a transmission means for periodically transmitting dummy electronic messages from said surveillance computer to said processing computer via said message broker and then being returned from said processing computer to said surveillance computer via said message broker;

a recording means for marking a time information indicating the present time on a dummy electronic message at least one timing of receiving a dummy electronic message and/or transmitting a dummy electronic message and/or executing a process based on a dummy electronic message at least in said message broker and in said processing computer; and

an error prediction means for making a storing means of said surveillance computer store time information marked on a dummy electronic message being returned to said surveillance computer from said processing computer via said message broker, and for predicting an error occurrence in said computer system based on elapsed time while a dummy electronic message having been transmitted from said surveillance computer returns to be received by said surveillance computer and a mean value of said elapsed time.

- (2) The computer system according to Claim 1, where said dummy electronic message has the same format as that of the electronic message sent from said terminal and a specified item of information is set in a predetermined field of said dummy electronic message.

- (3) The computer system according to Claim 1, wherein a plurality of processing computers are provided as said processing computer and said transmission means sends said dummy electronic message to each of said plurality of processing computers.
- (4) The computer system according to Claim 1, wherein said error prediction means calculates time elapsed between transmission and reception of a dummy electronic message in each of the segments between said surveillance computer and said message broker and between said message broker and said processing computer and the mean elapsed time based on the time information stored in a storing means of said surveillance computer, and further uses the calculated elapsed time and the mean elapsed time in each of segments to predict an error occurrence in said computer system.
- (5) The computer system according to Claim 4, wherein said recording means records time information in the dummy electronic message when a dummy message is received at and sent from said message broker; and

said error prediction means calculates time elapsed between the reception of the dummy electronic message by said message broker and the transmission of the dummy electronic message by said message broker and the mean elapsed time and uses the elapsed time between the reception of the dummy electronic message by said message broker and the transmission time of the dummy electronic message by said message broker and the mean elapsed time to predict an error occurrence in said computer system.